U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey  Topographic

Field No.  Ph-44 (49)  Office No.  m-9805

LOCALITY

State  Alaska
General locality  South Coast Alaska Peninsula
Locality  Cape Kultuk

CHIEF OF PARTY
John Bowie Jr. Chief of Party
Division of Photogrammetry, Wash., D.C.

LIBRARY & ARCHIVES
DATE  MAR 25 1955
DATA RECORD

T = 9805

Project No. (II): Ph-44(49) Quadrangle Name (IV): CAPES KULIAK & ATUSHAGVIK

(08-338)

Field Office (II): USGS Ship LESTER JONES Chief of Party: John Bowie Jr

Photogrammetric Office (III): Baltimore, Md Washington, D.C.

Instructions dated (II) (III):

Method of Compilation (III): Reading Plotter

Manuscript Scale (III): 1:20,000 Stereoscopic Plotting Instrument Scale (III): 1:20,000

Scale Factor (III): 1:1

Date received in Washington Office (IV): 5-23-51 Date reported to Nautical Chart Branch (IV): 5-25-51

Applied to Chart No. 8556 Date: 9/28/51 Date registered (IV): 12-14-54

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): NA 1927

Vertical Datum (III):

Mean sea level except as follows:
Elevations shown as (f) refer to mean high water
Elevations shown as (g) refer to sounding datum (i.e., mean low water or mean lower low water)

Shoreline at MNW

Reference Station (III):

Lat.: Long. Adjusted

Plane Coordinates (IV):

Y = State: Alaska Zone: 5

X =

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.
Areas contoured by various personnel
(Show name within area)

98% by Clarence E. Miefeldt
2% by Louis Levin
DATA RECORD

Field Inspection by (II): John Bowie Jr. Date: 13 Sep 49

Planetary contouring by (II): None Date: 

Completion Surveys by (II): None Date: 

Mean High Water Location (III) (State date and method of location):

MHW line is dated 1949; it was instrument delineated from photographs taken in 1949.

Projection and Grids ruled by (IV): Ruling Machine Date: 14 Jan 51

(manuscripts)

Projection and Grids checked by (IV): Theodore L. Janson Date: 14 Jan 51

Control plotted by (III): Robert L. Sugden Date: 20 Jan 51

Control checked by (III): John B. McDonald Date: 20 Jan 51

Radial Plot (III): Frank J. Tarcza Date: 29 Jun 50

Delineation by: Planimetry and Contours Louis Levin and Clarence E. Misfeldt Date: 14 Apr 51

Compiled Manuscript (III): Robert L. Sugden and John B. McDonald Date: 20 Apr 51

Photogrammetric Office Review by (III): Louis J. Reed Date: 31 May 51

Elevations on Manuscript checked by (III): Louis J. Reed Date: 31 May 51

Form T Page 3
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<td>1:20,000</td>
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<tr>
<td>thru</td>
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</table>

Tide data furnished by Mr. Wilcox of Tides & Currents, 26 Dec 50, as calculated from staff readings taken in the area at about the time the photographs were exposed.

LJR

Land Area (Sq. Statute Miles) (III): See remarks below

Shoreline (More than 200 meters to opposite shore) (III): See remarks below

Shoreline (Less than 200 meters to opposite shore) (III): None

Control Leveling - Miles (II): None

Number of Triangulation Stations searched for (II): 1

Number of BMs searched for (II): None

Number of Recoverable Photo Stations established (III): None

Number of Temporary Photo Hydro Stations established (III): None

Remarks: T-9805

Land area = 43 sq mi

Shoreline = 55 miles
ALASKA, Gulf of Alaska

Kukak Bay
SUMMARY TO ACCOMPANY T-9805

Topographic map T-9805 is one of four similar maps in project Ph-44(F49). It covers the vicinity of Cape Kulik, Alaska Peninsula, from latitude 58° 04' to 58° 12' and longitude 154° 06' to 154° 30'. The map was compiled in the Washington Office on the Reading Plotter from rectified nine lens photographs without benefit of field inspection. The contour interval is 100 feet supplemented by a contour interval of 50 feet. The manuscript was compiled on vinyllite ruled with a polyconic projection at 1:20,000 scale on the N.A. 1927 Datum. A military grid, 2500 meter universal transverse mercator was ruled on the manuscript. Material relative to this map is filed as follows:

1. Division of Photogrammetry General Files

2. Bureau Archives
   a. Descriptive Report for T-9805
   b. Cloth-backed lithographic print of T-9805 at manuscript scale.

* 25 ft contour is also shown.
2. Areal field inspection

The area generally is mountainous with many sections of ravel shoreline composed of large rock segments which have broken away from the cliff edge at land. In other sections, the shore is composed of rather large smooth boulders, gravel, and a few intermittent sand beaches. At the north end of Kukak Bay large glacial streams have deposited material to make a low flat mud and sand area which at low tide drains off to extend about a mile beyond the high water line. For the most part the hills and mountains rise abruptly from the shore except that in the glacial stream areas the land slopes more gently to the mountains several miles inland.

A heavy growth of alder and green covers most of the area up to about the 1000 foot level. Beyond that there is only scattered alder and the grass growth terminates at about 1500 feet.

The East-West mountain ridge extending west from Cape Inukshuk has a sediment slope on the south side but drops off with a sheer cliff on the north side. Along the western shore of the bay the basaltic flows of the muck are seen as a semicircular arc on the north side. The north side of the arc is lower than the upper and includes a deep gorge or channel. The higher north in the wetlands have some snow on them throughout the year. A steep cliff about 1750 feet high can be seen from seaward just below Kukak Volcano.

Throughout the area there are numerous odd shaped patches of volcanic sand presumably deposited during the 1912 eruption of Mt. Katmai. This sand is white in color and fine in texture. On the photographs it appears like snow.

Only trimetrogon photographs were available for field inspection at the beginning of the season. On 5 August 1949 nine-lens photographs were taken and prints became available to the field party in the early part of September. Some field inspection and control identification had been accomplished on the trimetrogon photographs but subsequently all of the information was transferred to the nine-lens prints.

The trimetrogon and nine-lens photographs then used in the field were covered with a sheet of Kodaktrace cut to fit the trimmed photographs with enough overlap for securing over the ends with Scotch tape. All field notes were made on the Kodaktrace overlay and later transferred to the photographs.

In the field one end of the Kodaktrace was fixed and the photograph consulted directly before the notes were made on the overlay. No difficulty was experienced in resolving the notes at a later date. It is believed that these notes can be made easier this way so long leaded can be utilized in crowded areas without cluttering up the photograph.

The quality of the nine-lens photographs was excellent. Field inspection was accomplished using a 20 foot dory with an improvised table board set across the gunwales about midships. A canvas dodger served to keep most of the spray off the photographs. The dory was powered with an outboard motor and beach landings were made as necessary for measurements
and closer inspection. About half of the field inspection was accomplished while running between points during the graphic control surveys. A road lead pencil was found best for making the notes on the blue appearing kodalux.

It was impossible to use a mirror stereoscope in the dory and the small pocket simple lens type was resorted to. At that it was impossible to use the small stereoscope on the large nine-lens prints. More success was experienced when using the trinocular prints. At the first opportunity marked points were verifield with the mirror stereoscope aboard the HESTER JONES.

A complete topographic survey was made of Cannery Passage obviating the need for photo inspection. See Descriptive Report, Sheet LJ-D-49.

3. Horizontal control

Prior to the nine-lens photography of 3 August 1949 all of the main scheme triangulation stations except BGII, IIA, and ZFO were marked on the ground with either white cloth squares, 10 feet on a side, or by whitewash. Also, most all of the hydrographic signals (located by graphic control) had been whitewashed. As a consequence practically all of the shoreside horizontal control has been identified positively by locating the white images on the nine-lens prints. Of these stations marked prior to photography only GIV/T, IAF, HIN, and BONE could not be marked directly. However, the last three named stations have substitute stations for identification. The bulk of the topographic stations were identified with the aid of the whitewash images.

Interior control stations were established by theodolite intersection. Most of these peaks have been identified and marked direct.

(a) List of supplemental control established by plane table graphic control survey:

<table>
<thead>
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<th>Station Name</th>
<th>Graphic Control Sheet</th>
<th>Marked on Photograph</th>
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<td>2/3/49</td>
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<tr>
<td>--------------</td>
<td>-----------------------</td>
<td>----------------------</td>
</tr>
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</table>

(b) No datum adjustment made by field party.
(c) All control established by G. & G. Survey.
(d) All stations required recovered and positively identified.
(e) No 'lost' stations.
(f) Practically all of the identification was positive.
4. Vertical control

During the observations for triangulation horizontal control, vertical control was established by measuring double zenith distances between main station stations and to all of the intersected mountain peaks. However, it was deemed more expedient to determine the elevation of some of the main station stations particularly in the north end of the bay, by plane table. Additional checked spot points on the lower hills were determined by plane table. Most of the intersected peaks will serve as both horizontal and vertical control. There are no bench marks for the establishment of level lines in this area.

Of the near peaks located only 'D' and 'J' were not identified on the field photographs. These two peaks and the inner ridge of peaks from Devils Deck thru Mt. Denison are not covered in the nine-lens photography.

However, these peaks have been indicated on several of the oblique trimetrogon photographs. On these they show as profile similar to a horizontal photograph.

5. Contours and drainage

There was no plan table contouring on this project.

6. Woodland cover

A very few evergreen trees are scattered about the area and there is a small stand of cottonwood trees just southeast of Apaligik Island on the mainland.

7. Shoreline and alonshore features

(a) In many areas of the photographs the mean high water line is not easily distinguished. The numerous short dashes appearing on the photographs are in most cases the result of an estimation in the field while cruising along the shore. Refer to graphic control sheets of this project for sections of mean high water line.

(b) No lower low water line is indicated on the field photographs. The graphic control and hydrographic surveys of this same project delineate these features.

(c) The legend 'broken rock' has been used often in the field inspection notes. This type of shore is composed of jargad rock sections of moderate size which have fallen away from the nearly cliff. These rocks lie on the surface in contrast to other sections of shoreline where the rock is in erop.

(d) In most cases the elevations of bluff have been estimated and refer to the approximate height of an overhanging or steep bluff just back of the mean high water line.
(a) The only wharf in the area is that belonging to the Mainland
Fisheries at the north end of Cannery Passage. This wharf is to be enlarged
sometime in the future although it only is of semi-permanent nature
being erected on set piles.

(b) There are no submarine cables in this area.

(c) The two twin black tanks shown on topographic sheet LJ-D-49
are small and of no importance as they sit upon a hillside and are not
conspicuous.

8. Offshore Features.

A great many of the offshore high water rocks have been surveyed
on the graphic control sheets. Others have been indicated on the field
photographs.

Limits of several areas and some lower low water line were surveyed
on the graphic control sheets. The remainder of the lower low water line
has been defined by the hydrographic survey.

All of the offshore and important reefs were surveyed either by
plane table, or sextant and plotted on the hydrographic sheet. On some
of the photographs, reefs have been noted but only for identification and
the field inspection is not complete or necessary because of contemporary surveys.
For these reefs close inshore no attempt was made to refer them to the datum
plane. Where the note on the photograph simply says 'reef' and is not
surveyed otherwise it indicates a reef wash at some stage of the tide but
not boring at high water. Usually these reefs are very rough and only the
note 'bar at LLW' would apply. The above would also apply to rocky ledges
where there are no further notes.

9. Landmarks and aids.

Landmarks and aids are covered in the Report of Landmarks for
Charts, Form 567 for this project and the report on the graphic control survey.

10. Boundaries, monuments, and lines.

This area is within the boundary of the Katmai National Monument.

11. Other control.

Only one recoverable topographic station (LAND) was necessary to
supplement the triangulation control.

12. Other interior features.

There are no other interior features already not noted.


The special report on geographic names will be submitted with the
records of this survey.
14. Special reports and supplemental data

All of the following reports and data refer to the survey operations of the LESTER JGIES in Kealak Bay during 1949:

Title                                                                                                    When submitted

a. Season's Report                                                                                       About 16 January 1950
b. Triangulation Report                                                                                   

c. Descriptive Report, hydrographic sheets LJ-2149 and LJ-1149                                           


e. Descriptive Report, topographic sheet LJ-D-49                                                          

f. Landmarks for Charts, Form 567                                                                        

g. Coast Pilot Report                                                                                     10 November 1949
h. Chart letter                                                                                           10 November 1949

i. Information for Notices to Mariners                                                                  10 November 1949

j. Geographic Map Report                                                                                  About 16 January 1950

k. Special Pictorial Report                                                                                About 20 January 1950

l. Abstract of Elevations, Land, Scheme Stations                                                          Geodesy

m. Abstract of Elevations, Mountains and Peaks                                                           Geodesy

n. Horizontal K-20 photographs showing mountain peaks                                                   About 20 January 1950

15. Pictograph list

(a) All field inspection notes will be found on the following list of nine-lens prints:

24939
24942 - 24943 inclusive
24951 - 24956
24957
24961
24973
(b) Supplemental and duplicate field inspection notes will be found on the following list of trimetragen prints:

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<td>481-VT</td>
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<tr>
<td>463VT</td>
<td>481-RT</td>
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</tbody>
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Approved and Forwarded,
Date: 4/1/50  Place: Seattle, WA

Respectfully submitted,

[Signature]

J. R. Bower, Jr.
CGLOR., CGGS

CMDR., SHIP J. LESTER JONES

[Signature]

HAPOLD J. SEABORG
LIEUT. CGLOR., CGGS
21. Area Covered:

This plot covers the areas of T-9302, T-9303, and a part of T-9305 into which the plot was extended as far as photographic coverage was available. This area includes all of Kukak Bay plus shoreline between Cape Nukshak and Cape Kuliak, and along Shalikof Strait opposite Kodiak Island.

22. Method:

Vinylite base sheets with polyconic projections ruled at a scale of 20,000 were used; no manuscripts were needed. All control stations were plotted on the base sheets using beam compass and meter bar. A steel protractor was used to plot the two sub-stations.

A sketch showing quad layout and distribution of control and photograph centers follows this plot report.

Thirty-two metal-mounted 9-lens photographs were used in this plot. They were at 20,000 scale and numbered as follows:

24935 thru 24957, and 24963 thru 24974.

The symbols used on these photos do not follow standard instructions; symbols used were given in special instructions for radial plots for 9-lens plotter use. A 4mm circle was used for control stations and pass points; both 4mm and 6mm circles were used for photo centers. A 3mm circle is used for positions on both templates and the base sheets.

Vinylite templates were made of each of the 32 photographs using a master template to adjust for errors resulting from paper distortion and from chamber displacements.

A preliminary plot was first constructed to determine the relative amount of tilt in the photos. The tilt was observed by noting the displacements of image points and low control stations. The image points were represented on the templates by small red dots near the radial lines. The templates were arranged in groups having the same apparent amount of tilt. Except in the southerly flight, 24970 thru 24974, there were no badly tilted photos found. Since there was sufficient control in the Kukak Bay area so that any template could be laid individually, the radial plot was begun in this area with the eastern halves of the two northerly flights. The most nearly vertical templates were laid first and the slightly tilted templates were laid next. Those with the most tilt were laid last, on top. There was no difficulty in constructing this plot in the Kukak Bay area.
The western half of T-9302 had no control except two high peaks which were suitable for vertical control only. Before the plot was extended across this area, the third flight, 28463 thru 28469, was laid. Although there are only two control stations south of Cape Ugyak, one at Cape Gull and one at Cape Kulik, the irregular shoreline allowed the selection of many shoreline pass points. With these two stations GULL, 1906 and KULIK, 1906, and pass points from Kukak Bay photos, a good plot was easily constructed with this third flight. The plot was then extended west across T-9302 beyond the control in Kukak Bay. After considerable adjustment a fair plot was obtained but the two peaks were not held. The error was about 1.5 mm on each. This could be due to a combination of weak positions, inaccurate identification and lateral displacements due to tilting which made it possible to establish good intersections on the radial lines on these high points.

The most southerly flight was laid last since these photos were half, or more, water areas. They were found to be considerably tilted and did not add anything of value to the plot.

The completed plot was placed on a light table and the positions of all points, including control and centers, were pricked on the top templetts. These points were circled with a 3 mm blue circle. The positions were then established on all templetts and on the base sheets by drilling down thru to the base sheets with a small jeweler’s drill, .013” in diameter. All points were circled on each templet before removal from the plot and also circled on the base sheet with a 3 mm circle.

23. Adequacy of Control:

There was abundant control in the Kukak Bay area from Nukshak Point to Cape Ugyak. South of Cape Ugyak there are only two control stations, GULL, 1906 and KULIK, 1906. But it is believed that a good plot was obtained along the shoreline and all points to Cape Kulik are within required accuracy for shoreline delineation. In the western half of T-9302, the plot was extended beyond control. Peak C, 1949 and Peak Z, 1949, are near the western edge but can not be relied for horizontal control due to weak position and high elevation (Peak C is nearly a mile high). A fair plot was obtained after considerable adjustment and pass points in the western edge of T-9302 are believed to be within 3 mm of their correct position.

There was only one horizontal control station, JONES, 1949 (except for some peaks) which could not be held in the plot as originally identified. Radially-plotted position was about 7 mm south of the geographic position. It was misidentified in the field. The point identified was probably a rock outcrop which shows as a whit spot. The station was marked with white cloth 10 feet square prior to photography. After the radially-plotted position was obtained, this white spot was readily identified at the GP when re-examined stereoscopically.
The following peaks could not be held as originally pricked on the office photographs:

PEAK G, 1949; Plotted position falls 1.2mm SE of GP. It was reprinted on an other high point at the correct position.

PEAK W, 1949; Plotted position falls 1.0mm W of GP. This is a ridge with several high points of equal elevation. It was pricked the same as on field identification. The correct point was reprinted on the photographs.

PEAK L, 1949; Plotted position falls 1.0mm SSW of GP. No good reason was found for this discrepancy. Re-examination failed to reveal a definite high point at the true position. A good definite intersection of radial lines was not obtained due to some tilt in the photographs.

PEAK U, 1949; Plotted position falls 1.5mm N of the GP. This is a definite sharp peak and can not be reprinted. There is probably some error in the position of the station. A good intersection of radial lines was obtained.

PEAK G, 1949; Plotted position falls about 1.5mm E of the GP. Due to tilt in photographs and elevations of about a mile, no definite intersection of radials was obtained. The GP is probably in error. It could not be reprinted.

PEAK Z, 1949; Plotted position falls 1.5mm S of the GP. It was identified in the field on another peak about a mile to the west. By coincidence, a peak selected as a pass point in the office turned out to be the station.

When control stations were reprinted, they were marked on the photographs with a 4mm blue circle.

24. Supplemental Data:

There were four graphic control surveys available in the Kukak Bay area, T-7123a and b at 1:20,000, and T-7060a and b at 1:10,000.

Thirty-one hydrographic signals and one recoverable topo station (LAND, 1944) were identified on the field photographs. The positions for these points were transferred from the 1:20,000 graphic control sheets to the base sheets for a comparison with the radial plot. Where the discrepancy was less than 0.5mm, no attempt was made to find the reason. Two signals were in error by 1mm or more. END, 1949 falls about 1.5mm W of the graphic control position. Since identification is positive and the position falls in the water, there must be an error in the graphic control sheet. This signal is about 500m from station KUKAK, 1949. END, 1949, falls about 1.5mm E of the graphic control position. Identification is difficult and indefinate. This could be due to identification on the photos. It was pricked the same as shown on the field photographs.
The radially-plotted positions of all hydrographic signals were marked on the base sheet by a 3cm blue circle whether or not they agreed with graphic control locations which are small red circles about 1cm in diameter.

25. Photography:

Photo coverage was adequate and definition was very good. Except in the most southerly flight, 24970 thru 24974, there were no badly tilted photographs. Most photos appeared nearly vertical and those which were tilted most were probably of less than one degree of tilt. They were better than photos previously used in this type of terrain. The southerly flight appeared to have considerable tilt but they were mostly in water areas and did not affect the radial plot north of Cape Kulik. They could have been disregarded for this radial plot. No tilt determination was made. These tilted photographs may be used in studying shoreline details between Cape Kulik and Cape Gull in case delineation of this area is made, but it is recommended that they not be used in establishing positions of shoreline detail since it is unlikely that an accurate rectification could be made.

26. Marking Stations Prior to Mapping Photography:

The triangulation stations in this area were marked prior to photography by 10' squares of white cloth. These appeared as small white spots on the photos and pricking of control was a simple but accurate process. The saving of time in pricking control is probably 75% or more since usually it involves considerable stereoscopic study in this rough terrain. There is further saving in time, which can not be estimated, in laying the plot since pricking is positive and can be held without question unless misidentified as was JONES, 1949 in this project. There would be considerable saving in field work also since one man could do the identification and also eliminate establishing sub-stations. The necessary field party which searches for and recovers stations could mark stations. There is additional time saved in computing and plotting sub-stations in the office. It is also quite likely that a more accurate radial plot results from this method of identification. The marking of control prior to photography is highly recommended, particularly in rough and undeveloped areas such as Alaska.

Respectfully submitted
27 June 1950

Approved and forwarded

Frank J. Tarcza
Cartographic Engineer

Hubert A. Paton
Comdr, USCGAS
Officer in Charge
31. Delineation:

Topography, shoreline, and planimetry were delineated at the same time on the Reading Plotter, model "A", using metal-mounted 9-lens photography. No field inspection of the shoreline on this quadrangle has been accomplished and therefore the shoreline is entirely instrument delineated.

All the land area falling within the limits of this map has not been compiled; a small portion in the SW corner is left unmapped, the west shore of Kinak Bay and Takhlik Island to the south.

32. Control:

Only one triangulation station is located in this quad but sufficient horizontal control was furnished by the radial plot covering the entire Kukak Bay area; refer to the radial plot report in this report where the horizontal control picture is thoroughly discussed.

No graphic control surveys were made in the area and therefore no photo-topo stations exist. Further, no hydro stations have been selected and located as such, but certain plotted details may serve that purpose anyhow.

Vertical control was furnished thru an abundance of shoreline or sealevel points plus elevations established while compiling the flight just north of this sheet on T-9302 and T-9303.

33. Supplemental Control: Data: None.

34. Contours and Drainage:

No areas of questionable contours or drainage exist. It is repeated that no field inspection was made of the shoreline and that compiled on the manuscript is instrument delineated. Photographic quality could have been slightly better; the film was apparently over-exposed.

35. Shoreline and Alongshore Details:

Apparent MLW lines and foul area lines are to be used with caution since they are instrument delineated from the mapping photos. The same is true of all other alongshore features compiled on this map.

36. Offshore Details: Ditto, for alongshore details.
37. **Landmarks and Aids:** None recorded.
38. **Control for Future Surveys:** None established as such.
39. **Junctions:**

Only one junction exists on the north side of this quadrangle where it matches with the south edge of T-9302 and the west end of the south edge of T-9303. This junction is in agreement. Only water exists to the east and south, and there is no contemporary survey to the west.

40. **Horizontal and vertical accuracy:** Standard. See Item 66 of the Review Report.

46. **Comparison with Existing Maps:**

USGS, KAMISHAK BAY - KATMAI REGION, ALASKA, Alaska
Map 16, 1:250,000, 1938, 200 ft contour interval.

47. **Comparison with Nautical Charts:**

USCGS, Alaska - South Coast, KODIAK ISLAND, No 8556, 1:350,000, Feb 1938 (1st Edition), last correction date of 28 August 1950.

48. **Geographic Name List:** See separate page following.

49. **Notes for the Hydrographer:** None.

50. **Compilation Office Review:** See separate form following.

Submitted by:

Orvis N. Dalbey,
Cartographer-Photogrammetric

Approved and Forwarded by:

Louis Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer
T-9805. Geographic Names.

- Alaska
- Shelikof Strait
- Alaska Peninsula
- Cape Atushagvik
- Missak Bay
- Cape Kulik
- Halferty Bay
- Kinak Bay (shift name southward to lat. 58°07', 5!)
- Russian Anchorage (east side Kinak Bay)
- Hidden Harbor

Names underlined in red are approved. 3-3-52.
PHOTOGRAMMETRIC OFFICE REVIEW

T-9805

1. Projection and grids
2. Title
3. Manuscript numbers
4. Manuscript size

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)
7. Photo hydro stations
8. Bench marks
9. Plotting of sextant fixes
10. Photogrammetric plot report
11. Detail points

ALONGSHORE AREAS
(Nautical Chart Data)
12. Shoreline
13. Low-water line
14. Rocks, shoals, etc.
15. Bridges
16. Aids to navigation
17. Landmarks
18. Other alongshore physical features
19. Other alongshore cultural features

PHYSICAL FEATURES
20. Water features
21. Natural ground cover
22. Planetary contours
23. Stereoscopic instrument contours
24. Contours in general
25. Spot elevations
26. Other physical features

CULTURAL FEATURES
27. Roads
28. Buildings
29. Railroads
30. Other cultural features

BOUNDARIES
31. Boundary lines
32. Public land lines

MISCELLANEOUS
33. Geographic names
34. Junctions
35. Legibility of the manuscript
36. Discrepancy overlay
37. Description report
38. Field inspection photographs
39. Forms

Reviewer
Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler
Supervisor

43. Remarks:
REVIEW REPORT T-9805
Topographic Map
7 March 1952

62. Comparison with Registered Topographic Surveys

<table>
<thead>
<tr>
<th>Survey</th>
<th>Scale</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>T-2901</td>
<td>1:20,000</td>
<td>1908</td>
</tr>
<tr>
<td>T-2901a</td>
<td>1:20,000</td>
<td>1908</td>
</tr>
</tbody>
</table>

T-9805 supersedes these surveys for nautical charting purposes.

63. Comparison with Maps of other Agencies

U.S.G.S. Kamishak Bay-Katmai Region, Alaska, Alaska Map 16, 1:250,000 1938

Because of scale and unsurveyed detail on the U.S.G.S. map an adequate comparison cannot be made between the two surveys.

64. Comparison with Contemporary Hydrographic Surveys

None

65. Comparison with Nautical Charts

Chart 8556, 1:350,000, ed. 1938, corr. 8/28/50

There are no significant differences between T-9805 and the chart.

66. Adequacy of Results and Future Surveys

This map is considered adequate as a base for hydrographic surveys and nautical chart construction. It meets the National Standards of Accuracy and complies with project instructions.

67. Control

Triangulation station Atushagvik, 1908 was plotted on the manuscript during review. The surrounding detail checks the geodetic description of the station closely as determined from office inspection.

Reviewed by:

[Signature]

G. B. Willey
Approved:

L C Lunde 22 Dec 1954
Chief, Review Section
Division of Photogrammetry

H E Edmiston
Chief, Nautical Chart Branch
Division of Charts

May Skellett
Chief, Div., Photogrammetry

Earl O. Hutton
Chief, Div. Coastal Surveys

1956